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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,823	10/03/2003	Thomas D. Gens	00-164.1	1131
7590 08/10/2005			EXAMINER	
Michael B. McNeil Liell & McNeil Attorneys P.C. P.O. Box 2417 Bloomington, IN 47402			OMGBA, ESSAMA	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/678,823

Applicant(s)

GENS, THOMAS D.

Examiner

Essama Omgba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15 and 20 is/are allowed.
- 6) ☒ Claim(s) 12, 13 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's arguments, see section titled Applicant's Arguments, filed July 21, 2005, with respect to the rejection(s) of claim(s) 12 under USC 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Niimi et al.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12, 13 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niimi et al. (US Patent 5,737,838).

With regards to claim 12, Niimi et al. discloses a method of making a piston unit, the method comprising positioning a central bore core 23 in a mold (20, 21, 22), positioning a ring shaped core 24 in the mold, the ring shaped core coaxial with the central bore core (figure 2), pouring metal around the ring shaped core and the central bore core to produce casting in which a central bore defined by the central bore core is fluidly isolated from a cavity 18 defined by the ring shaped core, and removing the ring shaped core from the casting, see column 2, lines 46-54 and 64-67 and column 3, lines 1-15 and 33-35. Although Niimi et al. does not disclose the ring core encircling the bore

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core, however it would have been obvious to one of ordinary skill in the art at the time the invention was made that the placement of the ring in the mold would depend on where the cavity is intended to be on the final product, which is within the general knowledge of one of ordinary skill in the art. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have positioned the ring shaped core so that it encircles the central bore core to produce a cavity that encircles a central bore as is within the general knowledge of one of ordinary skill in the art. Furthermore it would have been an obvious matter of design choice to have the central bore core of Niimi et al. to be the length of the cast article and therefore be encircled by the ring shaped core since such a modification would have involved a mere change in the size of the central bore core. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). Applicant should note that the preamble has not been given any patentable weight. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Furthermore the structure resulting from following the method steps of Niimi et al. is the same that would be obtained by following Applicant's claimed steps.

For claim 13, supporting the ring shaped core in a mold atop a plurality of pillars is an obvious matter of design choice wherein no stated problem is solved or

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unexpected results obtained in supporting the ring shaped core atop a plurality of pillars versus the method taught by Niimi et al. Furthermore many reference cited in the prosecution of the instant application show different ways of supporting a ring shaped core in a mold, see for example Woolcott (US Patent 3,459,253) or Diez et al. (US Patent 3,991,811). The examiner submits that it is within the level of one of ordinary skill in the art to appropriately support a ring shaped core in a mold.

For claim 16, Applicant should note that removing the ring shaped core by breaking the ring shaped core into smaller pieces is an obvious matter of design choice wherein no stated problem is solved or unexpected results obtained in removing the ring shaped core by breaking it into smaller pieces versus melting it as taught by Niimi et al. For claims 17-19, see, column 3, lines 28-29 and 37-40 of Niimi et al. Applicant should note that it is within the general knowledge of one of ordinary skill in the art to machine necessary openings in a cast. Furthermore check valves and valve seats are conventional in the art.

Allowable Subject Matter

4. Claims 14, 15 and 20 are allowed.

Response to Arguments

5. Applicant's arguments with respect to claims 12, 13 and 16-19 have been considered but are moot in view of the new ground(s) of rejection.


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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Essama Omgba
Primary Examiner
Art Unit 3726

eo
August 5, 2005